REMARKS/ARGUMENTS

The present Amendment is in response to the Final Office Action having a mailing date of July 3, 2006. Claims 1-5, 8-14, and 17-22 are pending in the present Application.

In the above-identified Final Office Action, the Examiner indicated that claims 8, 17, and 20 are allowed. The Examiner also indicated that claims 5 and 14 would be allowable if rewritten to overcome the 35 U.S.C. Applicant welcomes the Examiner's indication that claims 5, 8, 14, 17, and 20 contain allowable subject matter.

This application is under Final Rejection. Applicant has presented arguments hereinbelow that Applicant believes should render the claims allowable. In the event, however, that the Examiner is not persuaded by Applicant's arguments, Applicant respectfully requests that the Examiner enter the Amendment to clarify issues upon appeal.

In the above-identified Office Action, the Examiner rejected claims 1-4, 9-13, 18-19, and 21-22 under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,822,321 (Petersen) in view of U.S. Patent No. 5,870,036 (Franaszek). In so doing, the Examiner cited FIG. 5, item 505 and col. 3 line 33-col. 4, line 41 of Petersen as teaching representing a first end of the segment with a partition compression code word. The Examiner also cited Franaszek as teaching a method for compressing data.

Applicant respectfully disagrees with and traverses the Examiner's rejection. Independent claim 1 recites:

> 1. A method for compressing data for transmission using asynchronous transfer mode (ATM), the data including a plurality of segments, each of the plurality of segments including a first end and a second end, the method comprising the steps of:
> representing the first end of a segment of the plurality of segments with a partition compression code word, the segment being at least one of an ATM cell,

an ATM PDU and an IP packet, the first end being a boundary of the ATM cell, the ATM PDU or the IP packet;

> compressing a remaining portion of the segment.

Claim 9 recites:

> 9. A method for transmitting data using asynchronous transfer mode (ATM), the data including a plurality of segments, each of the plurality of segments including a first end and a second end, a dictionary being used in compressing the data, the method comprising the steps of:
> representing the first end of a segment of the plurality of segments with a partition compression code word, the segment being at least one of an ATM cell, an ATM PDU and an IP packet, the first end being a boundary of the ATM cell, the ATM PDU or the IP packet;
> transmitting the partition compression code word; and
> compressing a remaining portion of the segment;
> transmitting the remaining portion of the segment.

Similarly, independent claim 10 recites:

> 10. A method for transmitting data using asynchronous transfer mode (ATM), the data including a plurality of segments, each of the plurality of segments including a first end and a second end, the method comprising the steps of:
> representing the first end of a segment of the plurality of segments with a transparent mode command, the segment being at least one of an ATM cell, an ATM PDU and an IP packet, the first end being a boundary of the ATM cell, the ATM PDU or the IP packet;
> transmitting the transparent mode command; and
> transmitting a remaining portion of the segment.

Independent claim 11 recites:

> 11. A system for compressing data for transmission using asynchronous transfer mode (ATM), the data including a plurality of segments, each of the plurality of segments including a first end and a second end, the system comprising:
> means for representing the first end of a segment of the plurality of segments with a partition compression code word, the segment being at least one of an ATM cell, an ATM PDU and an IP packet, the first end being a boundary of the ATM cell, the ATM PDU or the IP packet; and
> means for compressing a remaining portion of the segment.

Independent claim 18 recites:

18. A system for transmitting data using asynchronous transfer mode (ATM), the data including a plurality of segments, each of the plurality of segments including a first end and a second end, the system comprising the steps of:

means for representing the first end of a segment of the plurality of segments with a transparent mode command, the segment being at least one of an ATM cell, an ATM PDU and an IP packet, the first end being a boundary of the ATM cell, the ATM PDU or the IP packet;

means for transmitting the transparent mode command and a remaining portion of the segment.

Independent claim 19 recites:

19. A computer-readable medium containing a program for compressing data for transmission using asynchronous transfer mode (ATM), the data including a plurality of segments, each of the plurality of segments including a first end and a second end, the program including instructions for:

representing the first end of a segment of the plurality of segments with a partition compression code word, the segment being at least one of an ATM cell, an ATM PDU and an IP packet, the first end being a boundary of the ATM cell, the ATM PDU or the IP packet;

compressing a remaining portion of the segment.

Independent claim 21 recites:

21. A computer-readable medium containing a program for transmitting data using asynchronous transfer mode (ATM), the data including a plurality of segments, each of the plurality of segments including a first end and a second end, a dictionary being used in compressing the data, the program including instructions for:

representing the first end of a segment of the plurality of segments with a partition compression code word, the segment being at least one of an ATM cell, an ATM PDU and an IP packet, the first end being a boundary of the ATM cell, the ATM PDU or the IP packet;

transmitting the partition compression code word;

compressing a remaining portion of the segment; and

transmitting the remaining portion of the segment.

Independent claim 22 recites:

22. A computer-readable medium containing a program for transmitting data using asynchronous transfer mode (ATM), the data including a plurality of segments, each of the plurality of segments including a first end and a second end, the program including instructions for:

representing the first end of a segment of the plurality of segments with a transparent mode command, the segment being at least one of an ATM cell, an ATM PDU and an IP packet, the first end being a boundary of the ATM cell, the ATM PDU or the IP packet;

transmitting the transparent mode command; and

transmitting a remaining portion of the segment.

Thus, independent claims 1, 9, 10, 11, 18, 19, 21, and 22 recites methods, systems, and computer-readable media which recite representing the first end of a segment with a partition compression code word or a transparent mode command. As described in the specification, an end of the segment is a *boundary* of the segment. Specification, page 9, lines 7-16. See also, FIGS. 7-8 and accompanying discussion. Consequently, the first end, or boundary, of the segment is represented by the partition compression code word or transparent mode command. Thus, using the methods, systems, and computer-readable media recited in claims 1, 9-11, and 18-22, data may be transmitted in packets such that the boundaries of IP packets, ATM PDUs and/or ATM cells are delineated. Consequently, multiple IP packets may be placed in an ATM PDU, more ATM cells may be placed in a particular bit stream, compression may be made more efficient and network performance may be improved. Specification, page 9, lines 17-20, page 12, lines 8-19, and page 13, lines 10-18.

Petersen in view of Franaszek neither teaches nor suggests the methods, systems, and computer-readable media recited in independent claims 1, 9-11, and 17-22. In particular, Petersen in view of Franaszek fail to teach or suggest representing a first end, or boundary, of a segment with a partition compression code word or a transparent mode command.

Although Peterson describes the first end being the starting portion of a segment, Applicant disagrees that Petersen indicates that a first end is represented using a compression code word or transparent mode command. Peterson describes the benefits of segmenting data transmission into

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smaller packets. Peterson, col. 1, lines 8-11 and 21-29. Further, the cited figure of Peterson merely shows that the start of a particular segment corresponds with the start of a particular data packet. Although representing first and last segments is described, the cited portion of Peterson fails to describe using a code word to represent a *boundary* of an IP packet, an ATM PDU, and/or an ATM cell. Consequently, Petersen fails to teach or suggest representing a *first end* using a compression code word or transparent mode command.

Franaszek fails to remedy the defects of Petersen. Franaszek does describe a system that performs compression. The cited portions of Franaszek describe compressing blocks of data. Franaszek, col. 4, lines 14-20. In particular, Franaszek describes selecting an optimal compression method from a number of compression methods (including leaving the block uncompressed) for each block. Franaszek, col. 5, lines 19-33. The system of Franaszek uses an identifier to indicate whether the block has been compressed using a dictionary. Franaszek, col. 4, lines 46-49. The dictionary includes "dictionary blocks" that are stored in memory and accessed using an index that indicates the offset (or start) of a dictionary block. Franaszek, col. 4, lines 50-51. If the block is compressed using a dictionary, and thus dictionary blocks, Franaszek utilizes an identifier for the dictionary block to which the block being compressed corresponds. Thus, the block being compressed is replaced by data including an index indicating the compression method (e.g. which dictionary based method or which non-dictionary based method) used, an identifier for the dictionary block, and a compression method description. Franaszek, col. 4, lines 55-59.

Although Franaszek describes compressing blocks of data, Franaszek fails to describe representing the first end of a *segment being compressed* with a compression code word or a transparent mode command. Similarly, although an index may be used represent the start of a

dictionary block stored *in memory*. Applicant can find no mention in Franaszek of a similar index or code word being used to represent the start of a *segment being compressed*. Consequently, although Franaszek functions well for its intended purpose, Franaszek also fails to teach or suggest the methods, systems, and computer-readable media recited in claims 1, 9-11, and 18-19, and 21-22.

Both Petersen and Franaszek fail to teach or suggest representing a first end of the segment being compressed with a compression code word or a transparent mode command. Thus, any combination of Petersen and Franaszek would also fail to teach or suggest this feature. Stated differently, the addition of Franaszek might allow the teachings of Petersen to also compress segments. However, the combination would still not use a compression code word or transparent mode command to represent the first end of a segment. Consequently, Petersen in view of Franaszek fails to teach or suggest the methods, systems, and computer-readable media recited in claims 1, 9-11, 18-19, and 21-22. Accordingly, Applicant respectfully submits that independent claims 1, 9-11, and 17-22 are allowable over the cited references.

Claims 2-4 depend upon independent claim 1. Claims 12-13 depends upon independent claim 11. Consequently, the arguments herein apply with full force to claims 2-4 and 12-13. Accordingly, Applicant respectfully submits that claims 2-4 and 12-13 are also allowable over the cited references.

Applicant's attorney believes that this application is in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicant's attorney at the telephone number indicated below.

Respectfully submitted,

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Date

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